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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,690	10/11/2001	Tsuyoshi Yokokawa	2001_1539A	6318

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,690

Applicant(s)

YOKOKAWA, TSUYOSHI

Examiner

Peter Vincent M Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 6-12 and 18-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,13-15 and 17 is/are rejected.
- 7) ☒ Claim(s) 4 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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DETAILED ACTION

Election/Restrictions

1. Claims 6-12 & 18-24 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Information Disclosure Statement

2. The information disclosure statement filed April 4, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Note that JP 6-84272 & JP 7-13905 were not supplied by applicant.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g.,

Page 6, 8th line; and page 14, 18th line: Delete "not".

Page 36, 7th line: "second" should be --third--.

The word --judgment-- has been misspelled throughout the specification/claims.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 & 13 rejected under 35 U.S.C. 102(b) as being anticipated by Ohtomo (US 4,825,419).

In regard to claim 1, Ohtomo discloses in figures 1 & 2 an optical disk data erasing apparatus (100) which is an optical disk recording apparatus for writing or reading data in/from a recordable optical disk (50) by irradiating the optical disk with a laser beam, said optical disk recording apparatus being connected to a host computer (31) through an interface bus ("BUS"), said optical disk data erasing apparatus comprising: a judgment means for judging as to whether a loaded optical disk is a write-once optical disk or not (inherent: see note below); an instruction recognition means (1 & 3) for recognizing an instruction from the host computer; and an erasing means (figure 5, step 304) for executing a data erasing process on the basis of the instruction; wherein said erasing means overwrites the optical disk which is judged as a write-once optical disk by the judgment means, by irradiating the optical disk with a laser beam having the same recording power (column 5, lines 31-34) as that at recording, thereby erasing data recorded on the optical disk. It should be noted that the presence of a judgment means for

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making a judgment as to whether a loaded optical disk is a write-once optical disk or not is inherently disclosed. Ohtomo discloses (see column 2, lines 8-13) an apparatus of write-once read-many type. Therefore, Ohtomo's invention is designed specifically for write-once optical disks only.

In regard to claim 13, Ohtomo discloses an optical disk data erasing method comprising: a judgment step of making a judgment as to whether a loaded optical disk is a write-once optical disk or not (inherent: see claim 1 rejection above); an instruction recognition step (figure 1, elements 1 & 3) of recognizing an instruction from a host computer (31); and a data erasing step (figure 5, step 304) of overwriting the optical disk which is judged as a write-once optical disk in the judgment step, by irradiating the optical disk with a laser beam having the same recording power (column 5, lines 31-34) as that at recording, on the basis of the instruction, thereby erasing data recorded on the optical disk.

7. Claims 2 & 14 rejected under 35 U.S.C. 102(e) as being anticipated by Iida et al. (hereafter Iida) (JP 2001-209944A).

In regard to claim 2, Iida discloses an optical disk data erasing apparatus (figure 2) which is an optical disk recording apparatus for writing or reading data in/from a recordable optical disk (figure 2, element 1) by irradiating the optical disk with a laser beam (paragraph 0012), said optical disk recording apparatus being connected to a host computer (figure 2, element 20) through an interface bus (figure 2, element 19), said optical disk data erasing apparatus comprising: a judgment means for making a judgment as to whether a loaded optical disk is a write-once optical disk or not (inherent); an instruction recognition means for recognizing an instruction from the host computer

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(figure 1, step 1); and an erasing means for executing a data erasing process on the basis of the instruction (paragraph 0023); wherein said erasing means overwrites the optical disk which is judged as a write-once optical disk by the judgment means, by irradiating the optical disk with a laser beam having a recording power higher than that at recording (paragraph 0018), thereby erasing data recorded on the optical disk. It should be noted that the presence of a judgment means for making a judgment as to whether a loaded optical disk is a write-once optical disk or not is inherently disclosed. Iida discloses (see abstract) an apparatus for erasing data on an optical disk that allows just one time of writing of data, i.e., a write-once optical disk. Therefore, Iida's invention is designed specifically for write-once optical disks only.

In regard to claim 14, Iida discloses an optical disk data erasing method (figures 1 & 2) comprising: a judgment step of making a judgment as to whether a loaded optical disk (figure 2, element 1) is a write-once optical disk or not (inherent: see claim 2 rejection above); an instruction recognition step (figure 1, step 1) of recognizing an instruction from a host computer (figure 2, element 20); and an erasing step of overwriting the optical disk which is judged as a write-once optical disk in the judgment step (paragraph 0023), by irradiating the optical disk with a laser beam having a recording power higher than that at recording (paragraph 0018), on the basis of the instruction, thereby erasing data recorded on the optical disk.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 & 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomo in view of Yamamoto et al. (hereafter Yamamoto) (JP 04010261 A).

In regard to claim 2, Ohtomo discloses in figures 1 & 2 an optical disk data erasing apparatus (100) which is an optical disk recording apparatus for writing or reading data in/from a recordable optical disk (50) by irradiating the optical disk with a laser beam, said optical disk recording apparatus being connected to a host computer (31) through an interface bus ("BUS"), said optical disk data erasing apparatus comprising: a judgment means for making a judgment as to whether a loaded optical disk is a write-once optical disk or not (inherent: see claim 1 rejection above); an instruction recognition means (1 & 3) for recognizing an instruction from the host computer; and an erasing means (figure 5, step 304) for executing a data erasing process on the basis of the instruction; wherein said erasing means overwrites the optical disk which is judged as a write-once optical disk by the judgment means, by irradiating the optical disk with a laser beam (column 5, lines 31-34), thereby erasing data recorded on the optical disk. However, Ohtomo does not disclose that the laser beam at erasing has a recording power higher than that at recording.

Yamamoto (see abstract) discloses a laser beam having an erasing power higher than a recording power, such that the occurrence of an "erasing miss" is reduced. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have used a laser beam with an erasing power higher than a recording power as suggested by Yamamoto for the erasing apparatus of Ohtomo, the motivation being to

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reduce the occurrence of an “erasing miss”, thereby ensuring that confidential data is erased.

In regard to claim 14, Ohtomo discloses an optical disk data erasing method comprising: a judgment step of making a judgment as to whether a loaded optical disk is a write-once optical disk or not (inherent: see claim 1 rejection above); an instruction recognition step (figure 1, elements 1 & 3) of recognizing an instruction from a host computer (31); and a data erasing step (figure 5, step 304) of overwriting the optical disk which is judged as a write-once optical disk in the judgment step, by irradiating the optical disk with a laser beam (column 5, lines 31-34), on the basis of the instruction, thereby erasing data recorded on the optical disk. However, Ohtomo does not disclose that the laser beam at erasing has a recording power higher than that at recording.

Yamamoto (see abstract) discloses a laser beam having an erasing power higher than a recording power, such that the occurrence of an “erasing miss” is reduced. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have used a laser beam with an erasing power higher than a recording power as suggested by Yamamoto for the erasing method of Ohtomo, the motivation being to reduce the occurrence of an “erasing miss”, thereby ensuring that confidential data is erased.

10. Claims 1 & 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Iida in view of Kobayashi et al. (hereafter Kobayashi) (JP 63273242A).

In regard to claim 1, Iida discloses an optical disk data erasing apparatus (figure 2) which is an optical disk recording apparatus for writing or reading data in/from a recordable optical disk (figure 2, element 1) by irradiating the optical disk with a laser

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beam (paragraph 0012), said optical disk recording apparatus being connected to a host computer (figure 2, element 20) through an interface bus (figure 2, element 19), said optical disk data erasing apparatus comprising: a judgment means for judging as to whether a loaded optical disk is a write-once optical disk or not (inherent: see claim 2 rejection above); an instruction recognition means for recognizing an instruction from the host computer (figure 1, step 1); and an erasing means for executing a data erasing process on the basis of the instruction (paragraph 0023); wherein said erasing means overwrites the optical disk which is judged as a write-once optical disk by the judgment means. However, Iida does not disclose that the erasing means overwrites the optical disk by irradiating the optical disk with a laser beam having the same recording power as that at recording, thereby erasing data recorded on the optical disk.

Kobayashi discloses a writing and erasing method for magneto-optical disks (see abstract), wherein the writing power and the erasing power of a projecting light, i.e., the laser beam, are set equal in order to improve recording sensitivity and to simplify the control of the laser beam power. It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to provide a laser beam having the same recording power as that at recording as suggested by Kobayashi to the erasing means of Iida, the motivation being to improve recording sensitivity and to simplify the control of the laser beam power.

In regard to claim 13, Iida discloses an optical disk data erasing method (figures 1 & 2) comprising: a judgment step of making a judgment as to whether a loaded optical disk is a write-once optical disk or not (inherent: see claim 2 rejection above); an instruction recognition step (figure 1, step 1) of recognizing an instruction from a host

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computer (figure 2, element 20); and a data erasing step of overwriting the optical disk which is judged as a write-once optical disk in the judgment step on the basis of the instruction, thereby erasing data recorded on the optical disk (paragraph 0023). However, Iida does not disclose that the erasing step is performed by irradiating the optical disk with a laser beam having the same recording power as that at recording.

Kobayashi discloses a writing and erasing method for magneto-optical disks (see abstract), wherein the writing power and the erasing power of a projecting light, i.e., the laser beam, are set equal in order to improve recording sensitivity and to simplify the control of the laser beam power. It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to provide a laser beam having the same recording power as that at recording as suggested by Kobayashi to the erasing step of Iida, the motivation being to improve recording sensitivity and to simplify the control of the laser beam power.

11. Claims 3/(1 or 2), 5, 15/(13 or 14) & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomo as applied to claims 1 & 13 above or over Ohtomo & Yamamoto as applied to claims 2 & 14, and further in view of Takeuchi et al. (hereafter Takeuchi) (JP 03116535 A).

For a description of Ohtomo & Yamamoto, see the rejections above. However, neither Ohtomo nor Yamamoto discloses a disk recording information acquisition means/step for acquiring disk recording information relating to a data-recorded area or a data-unrecorded area of the write-once optical disk, on the basis of a disk recording information acquisition instruction which is issued by the host computer; wherein said erasing means/step erases data recorded in the data-recorded area.

Takeuchi (see abstract) discloses a means for determining whether an area of an optical disc is a recorded area or an unrecorded area, such that double writing to a recorded area is prevented. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have added the means/step for acquiring disk recording information relating to a recorded/unrecorded area as suggested by Takeuchi to the apparatus/method of Ohtomo & Yamamoto, the motivation being to prevent unnecessary erasing on an unrecorded area.

In regard to claims 5 & 17, Ohtomo discloses in figure 1 a notification means (13) for displaying a retrieval index, which specifies an area of the disc to be erased. Ohtomo also discloses an erasing area detection means/step (figure 5, step 303) for detecting, when an instruction which specifies a data erasing area (302) is issued from the user through the host computer on the basis of the disk recording information, an area corresponding to the specified data erasing area on the basis of the instruction; wherein said erasing means/step erases the data recorded in the erasing area (304) which is detected by the erasing area detection means/step.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vining et al. (US 6,377,526) discloses an apparatus and method for physically erasing data recorded on a non-erasable optical storage medium. Figure 5A shows a step of detecting whether the inserted medium is a write-once optical disk, and whether the disk is previously initialized. Figure 5C shows that the disk is ejected when it is detected that the inserted disk is invalid.

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Kawai (US 5,956,311 also JP 10214424 A) discloses an apparatus that destroys data stored in a CD-R by heating the surface of the disk to a very high temperature in order to prevent leaking of proprietary data.

Owa (JP 01213834 A) discloses an optical disk recording and reproducing device that permanently erases data of high secrecy.

Allowable Subject Matter

13. Claims 4 & 16 objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 4 & 16, no prior art of record alone or in combination discloses or suggests an optical disk data erasing apparatus/method comprising: a judgment means/step for judging as to whether a loaded optical disk is a write-once optical disk or not; an instruction recognition means/step for recognizing an instruction from the host computer; and an erasing means/step for executing a data erasing process on the basis of the instruction; a disk recording information acquisition means/step for acquiring disk recording information relating to a data-recorded area or a data-unrecorded area of the write-once optical disk; further comprising a **determination means/step for determining whether data are recorded on the write-once optical disk or not**, on the basis of the disk recording information which is obtained by the disk recording information acquisition means/step; **wherein, when data are recorded on the write-once optical disk, said erasing means/step executes the recorded-data erasing**

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process; and when no data are recorded on the optical disk, said determination means/step returns an error signal to the host computer to notify the user that the data erasing process is not to be executed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

PVA
03/24/2004


W. R. YOUNG
PRIMARY EXAMINER